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# The impact of IFRS 16 on Adidas AG's financial statements and company valuation

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Abstract

IFRS 16 provides new guidance on accounting for leases which will have a significant impact on Adidas' financial statements and company valuation as the company has strongly relied on off-balance sheet financing. Under IFRS 16, leases will be classified either as 'Right-of-use asset' which is representing the right to use the underlying asset or as 'Lease liability' which corresponds to the obligation to pay for the leased assets. IFRS 16 increases Adidas' EBITDA and EBIT by the value of newly recognised lease interest expenses but the total cash flow remains unaffected. In terms of valuation, the main impacts of IFRS 16 are the adjusted Enterprise-Equity-Bridge and especially the increasing debt portion of the WACC which lowers Adidas' cost of capital. Adidas' share price is very sensitive to the implementation of IFRS 16 as the value of lease liabilities has a significant impact on the company's WACC and, therefore, on the related valuation.

Keywords

IFRS 16, Capitalized Leases, Valuation Process, Enterprise-Equity-Bridge

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## I. Introduction and research question

In 2018, Adidas and its peer group had higher days payable (median: 72.9 days) than days receivable (median: 40.5 days) and median days of inventory of 129.9 days. This results in a median cash conversion cycle of 87.8 days in 2018. (Bloomberg, 2019) Thus, the companies can partially finance its operational activities on behalf of its suppliers which leads to high excess cash figures. In addition, also operational leasing is a generally used financing method to gain access to fixed assets without increasing the leverage ratio by purchasing them, especially for sportswear companies which are renting retail stores for its products. The related leases are treated as off-balance-sheet items and, therefore, do not account for net debt. However, as of January 1, 2019, IFRS 16 is effective which provides new guidance on accounting for leases. Under IFRS 16, lessees are obliged to recognise nearly all leases on the balance-sheet. (IFRS, 2016, p. 42) As a result, Adidas' financial statements must be adjusted for IFRS 16 and operational leases are capitalized which increase the company's net debt position. The objective of this research paper is to analyse the impact of IFRS 16 on Adidas' financial statements and company valuation.

## II. Adidas' capitalized operational leases

Adidas most significant off-balance-sheet items are operating leases which are related to own-retail stores, offices, warehouses, and equipment. Under IAS 17, the predecessor of IFRS 16, Adidas is not obliged to disclose its value of leased assets. (IFRS, 2016, p. 12) However, there are various methods for estimating this value. McKinsey recommends an estimation process by taking into consideration rental expense, cost of secured debt, and an estimated asset life with the following equation:

*Equation E.1 – Lease value estimation*

$$Lease\ Value_{t-1} = \left( \frac{Rental\ Expense_t}{k_d + \frac{1}{Asset\ Life}} \right)$$

*Source: McKinsey, 2010, p. 583*

In terms of rental expenses, Adidas discloses its minimum future lease payments within one year, one to five years, and more than five years. As it can be assumed that Adidas will renew the majority of its expiring leasing contracts on a yearly basis, which is also in line with Adidas' current leasing strategy of its stores[1], the future minimum lease payments within one year serve as best approximator for Adidas' rental expenses. From 2015 to 2018, rental expenses increased from EUR 476m to EUR 722m, implying a CAGR of 9.4%. It is expected that Adidas' future lease payments will continue this trend but at lower pace throughout the forecast period until 2025. As Adidas' debt is not rated, we assume an approximated credit rating of 'A' since the company's capital structure resembles the one of its main competitor Nike which is also 'A' rated by Moody's as of 24 October 2019. (Moody's, 2019) However, as leasing implies to rent an asset which is less risky than a company's unsecured debt (McKinsey, 2010, p. 583), the cost of debt is estimated with the risk-free rate plus an Aa2/AA credit spread, resulting in cost of debt of 0.42%. Even though Adidas separately discloses the life of each asset category, a decomposition of the future minimum lease payments per asset class is not provided. Thus, the asset life can only be estimated on company level. According to Lim, Mann and Mihov, an asset life can be computed with the following equation:

*Equation E.2 – Asset life estimation*

$$Asset\ Life = \frac{PP\&E}{Annual\ Depreciation}$$

*Source: Steve C. Lim, Steven C. Mann, and Vassil T. Mihov (2003)*

From 2015 to 2018, Adidas' average asset life was 5.8 years which serves as an approximator to calculate Adidas' lease value. Table T.1 summarizes the final outcomes of the equation until 2025.

*Table T.1 – Adidas' forecasted lease values*

| | **2018A** | **2019E** | **2020F** | **2021F** | **2022F** | **2023F** | **2024F** | **2025F** |
|---|---|---|---|---|---|---|---|---|
| Rental expense | 722 | 676 | 736 | 798 | 862 | 925 | 990 | 1,053 |
| Cost of debt | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% | 0.42% |
| Asset life | 5.5 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 | 5.8 |
| **Lease value** | **3,860** | **3,835** | **4,177** | **4,529** | **4,888** | **5,250** | **5,614** | **5,974** |

Source: *Adidas' financial statements; Analysts'* estimates

### III. Impact of IFRS 16 on Adidas' financial statements

Under IAS 17, a company can lease an asset which will not be recorded on the company's balance sheet. However, rental expenses associated with the lease must be recorded in the

[1] Adidas operates 12,000 stores in 1,200 cities in China and expects to accelerate its expansion to 2,400 cities in the near future (China Daily, 2019)

company's P&L statement. As a result, companies which are leasing its assets have lower operating profits and higher capital productivity, as typically seen in the retail industry. (McKinsey, 2010, p. 577) IFRS 16 provides new guidance on accounting for leases which will have a significant impact on Adidas' financial statements and company valuation as the company has strongly relied on off-balance sheet financing. IFRS 16 requires lessees to recognise assets and liabilities for all leases unless the lease term is 12 months or less or the underlying asset has a value lower than USD 5,000. (PwC, 2016, p. 7) Under IFRS 16, leases will be classified either as 'Right-of-use asset' which is representing the right to use the underlying asset or as 'Lease liability' which corresponds to the obligation to pay for the leased assets. (IFRS, 2016, p. 42)

In the P&L-statement, IFRS 16 will impact the specific line item under which a company has previously classified its lease expenses. The lease expenses recognised under IAS 17 will be separated in lease depreciation of the right-of-use asset and the related lease interest expense. (IFRS, 2016, p. 44) In case of Adidas, lease expenses are recognised as distribution and selling expenses which belong to other operating expenses.[2] Since Adidas is obliged to make these lease payments throughout the year, the calculated lease values presented in table T.1 must be adjusted by the lease depreciation in order to receive the end-of-year lease values.[3] Moreover, Adidas' operating expenses will decrease by the related lease interest expenses, resulting in an increased EBITDA and EBIT. (IFRS, 2016, p. 53) Table T.2 summarizes the adjusted lease values throughout the forecast period until 2025.

*Table T.2 – Adidas' end-of-year lease values*

| | **2018A** | **2019E** | **2020F** | **2021F** | **2022F** | **2023F** | **2024F** | **2025F** |
|---|---|---|---|---|---|---|---|---|
| Lease value | 3,860 | 3,835 | 4,177 | 4,529 | 4,888 | 5,250 | 5,614 | 5,974 |
| Lease depreciation | 706 | 660 | 719 | 779 | 841 | 903 | 966 | 1.028 |
| Lease interest | 16 | 16 | 18 | 19 | 21 | 22 | 24 | 25 |
| **Lease value (EoY)** | **3.154** | **3.175** | **3.459** | **3.750** | **4.047** | **4.347** | **4.648** | **4.946** |

*Source: Adidas' financial statements; Analysts' estimates*

As previously mentioned, the impact of IFRS 16 on Adidas' balance-sheet will be twofold: leases are classified either as 'Right-of-use asset' or as 'Lease liability'. As a result, Adidas off-balance-sheet leases will lead to a significant increase in the company's assets and liabilities.

[2] As distribution and selling expenses had the highest share of Adidas' other operating expenses throughout the last years, it is assumed that lease expenses are recognized under this line item
[3] Under IFRS 16, a lease expense will be separated in lease depreciation and lease interest expense

Based on Adidas' quarterly reports of 2019, right-of-use assets are part of the line item property, plant and equipment. In contrast, lease liabilities will be recognised as other non-current or current financial liabilities, depending on the maturity date of the respective leases. In case of Adidas, both sides of the balance-sheet will increase by the end-of-year lease values presented in table T.2.

In the cash-flow-statement, Adidas' annual lease depreciation will be recognised as depreciation of right-of-use assets which increases the cash flow from operating activities. (IFRS, 2016, p. 50) However, as lease depreciation equals a repayment of the capital element of operating leases, Adidas' financing cash flow will decrease by the same amount. (IFRS, 2016, p. 50) Thus, the cash flow from financing activities offsets the cash flow from operating activities. This is especially necessary to keep the definitions of NOPLAT, invested capital, and free cash flow consistent. (McKinsey, 2010, p. 156) Lastly, IFRS 16 has no direct impact on Adidas' investing cash flow. As a result, Adidas' total cash flow remains unaffected by the implementation of IFRS 16. (IFRS, 2016, p. 50)

**Impact of IFRS 16 on Adidas' company valuation**

From a valuation perspective, the impact of IFRS 16 on the valuation process is twofold: Adidas' Weighted Average Cost of Capital (WACC) and Enterprise-Equity-Bridge must be adjusted for capitalized operational leases.

In terms of WACC, the value of all debt-equivalent claims, such as leases or pension liabilities, must be included in the debt portion of the WACC only if free cash flow is also adjusted for these claims. To avoid a mismatch in the valuation process, consistency between free cash flow and cost of capital is paramount. (McKinsey, 2010, p. 289) In case of Adidas, forecasted lease liabilities of EUR 3.18bn for 2019 increase the debt portion of the WACC from 0.90% to 6.30%.[4] As a result of the difference between cost of debt (0.25%) and cost of equity (7.10%) as well as the change in capital structure, Adidas' WACC decreases from 7.04% to 6.67%.

To calculate the equity value in an enterprise DCF model, non-common share claims, such as lease liabilities, must be deducted in the Enterprise-Equity-Bridge to avoid a mismatch. (McKinsey, 2010, p. 115) As Adidas' share price is calculated as of 31 December 2020, forecasted lease liabilities (EoY) in the amount of EUR 3.46bn for 2020 are deducted from the

[4] WACC equation: McKinsey, 2010, p. 135

enterprise value. By applying all the previously mentioned changes of IFRS 16 on Adidas, the enterprise DCF model yields a share price of EUR 381.86 (‘base scenario’).

## IV. Conclusion

IFRS 16 has a significant impact on Adidas’ financial statement and company valuation as Adidas is leasing own-retail stores, offices, warehouses, and equipment with an approximated fair value of EUR 3.18bn for 2019. IFRS 16 increases Adidas’ EBITDA and EBIT by the value of newly recognised lease interest expenses but the total cash flow remains unaffected. In terms of valuation, the main impacts of IFRS 16 are the adjusted Enterprise-Equity-Bridge and especially the increasing debt portion of the WACC which lowers Adidas’ cost of capital.

*Table T.3 – Sensitivity analysis*

| | | Rental expense | | |
|---|---|---|---|---|
| | | -10% | 0% | 10% |
| **Asset life** | 4.8 | 481.11 | 374.51 | 230.60 |
| | 5.8 | 489.46 | **381.86** | 235.77 |
| | 6.8 | 497.85 | 389.25 | 240.98 |

*Source: Analysts‘ estimates*

By conducting a sensitivity analysis (see Table T.3) with Adidas’ forecasted rental expenses and average asset life as changing components of the capitalized leases equation (see Equation E.1), the share price is ranging between EUR 230.60 and EUR 497.85. The reasoning behind this broad range of share prices are Adidas’ forecasted terminal growth rate of 5.00% and cost of capital of 6.67% which are relatively close to each other, with a difference of only 1.67%. Thus, Adidas’ DCF model and the related share price are very sensitive to the implementation of IFRS 16 as the approximated fair value of lease liabilities has a significant impact on the company’s WACC and, therefore, on Adidas’ valuation.

## References


**Bloomberg (2019),** Bloomberg data on Adidas, Nike, Puma, Under Armour, Skechers, and Asics (Accessed 15 December 2019)

**China Daily (2019)**, Adidas eyes China expansion, Available at: https://www.chinadailyhk.com/articles/232/87/250/1558414837633.html (Accessed 21 December 2019)

**International Financial Reporting Standard (2016)**, Effects Analysis - IFRS 16 Leases, Available at: https://www.ifrs.org/-/media/project/leases/ifrs/published-documents/ifrs16-effects-analysis.pdf (Accessed 21 December 2019)

**McKinsey (2010)**, Valuation – Measuring and managing the value of companies, Fifth Edition, Hoboken, New Jersey: John Wiley & Sons

**Moody's (2019)**, Rating Action: Moody's affirms Nike's A1/P-1 rating, Available at: https://www.moodys.com/research/Moodys-affirms-NIKEs-A1P-1-ratings--PR_412246 (Accessed 15 December 2019)

**PwC (2016)**, IFRS 16 – The new leases standard, Available at: https://www.pwc.com/gx/en/services/audit-assurance/assets/ifrs-16-new-leases.pdf (Accessed 21 December 2019)

**Steve C. Lim, Steven C. Mann, and Vassil T. Mihov, (2003)**, Market Evaluation of Off-Balance Sheet Financing:
You Can Run but You Can't Hide, EFMA 2004 Basel Meetings Paper